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CLAIMS

1. (currently amended) A network device comprising:

optical switching logic coupled between a plurality of input optical interfaces and a plurality of output optical interfaces, for selectively forwarding an optical data stream having a given wavelength to either one of the optical interfaces for output on at least one optical fiber or to routing logic; and

wherein the routing logic is operably coupled to the switching logic to selectively receive the optical data stream from the optical switching logic and retrieve routing information from the optical data stream, wherein the routing information is used to dynamically control the forwarding of subsequent ~~the~~ optical data ~~stream~~ streams transmitted at the given wavelength through the optical switch logic to one of the output optical interfaces on the at least one optical fiber.

2. (original) The networking device of claim 1, wherein the optical switching logic is operably coupled to receive an incoming optical data stream from an incoming optical fiber over an incoming optical interface and selectively pass the incoming optical data stream through to an outgoing optical fiber over an outgoing optical interface or divert the incoming optical data stream for processing by the routing logic.

3. (original) The networking device of claim 2, wherein the optical switching logic comprises a demultiplexer operably coupled to demultiplex the incoming optical data stream from a number of incoming optical data streams received from the incoming optical fiber over the incoming optical interface.

4. (original) The networking device of claim 3, wherein the optical switching logic further comprises an optical switch operably coupled to receive the incoming optical data stream from the demultiplexer and to selectively pass the incoming optical data stream through to the outgoing optical fiber over the outgoing optical interface or divert the incoming optical data stream for processing by the routing logic.